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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,627	07/21/2003	David S. Benco	LUTZ 2 00216	5178

7590 05/18/2006

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EXAMINER	
DOAN, PHUOC HUU	
ART UNIT	**PAPER NUMBER**
2617	

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/623,627	BENCO ET AL.	
	Examiner	Art Unit	
	PHUOC H. DOAN	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *19-22* is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. In view of the Appeal Brief filed on 02/09/06, PROSECUTION IS HEREBY REOPENED. A new ground of rejection set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

GEORGE ENG
SUPERVISORY PATENT EXAMINER

Response to Arguments

2. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims **1-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Haymes (US Patent No: 6,751,443)** in view of **Oh (US Patent No: 6,714,789)** and further in view of **Scherzer (US Pub No: 2002/0193104)**.

As to claim 1, Haymes discloses a method for collecting data to identify an RF dead zone "**error rates and/or dead zones**" in a cell of a wireless network using a mobile station (col. 2, lines 20-30), the method including the steps: c) storing the position data in an RF dead zone network "**Fig. 3**" associated with the wireless network (col. 3, lines 35-47, and col. 4, lines 20-35).

However, Haymes does not disclose that: a) at a base station associated with a cell, receiving position data from powered up mobile station located within the

cell, wherein the position data includes multiple coordinates indicating a location of the mobile station within the cell; b) communicating the position data from the base station to a mobile switching center associated with the base station and the wireless network.

Oh discloses that: a) at a base station associated with a cell (Fig. 1, col. 4, lines 20-25), receiving position data from powered up mobile station located within the cell (col. 5, lines 30-40), wherein the position data includes multiple coordinates indicating a location of the mobile station within the cell (Fig. 3, col. 6, lines 5-28); b) communicating the position data from the base station to a mobile switching center associated with the base station and the wireless network (col. 4, lines 18-53). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the position data from the base station to a mobile switching center associated with the base station as taught by Oh to the system of Haymes in order to prevent the mobile station drop the call when they moves from different location.

Furthermore, the combination of Haymes and Oh do not disclose the position data sent by the mobile station in response to the mobile station determining that a received pilot strength measurement message is less than a predetermined threshold.

In the same field of endeavor, Scherzer discloses the position data sent by the mobile station in response to the mobile station determining that a received pilot strength measurement message is less than a predetermined threshold (page 3, par. [0035]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the position data sent by the mobile station in response to the mobile station determining that a received pilot strength measurement message is less than a predetermined threshold as taught by Scherzer to the combination of Haymes and Oh in order to detect the signal to make a system reliability.

As to claim 2, Haymes further discloses the method as set forth in claim 1 wherein the receiving step is performed whether or not the mobile station is connected to an incoming or outgoing call (col. 2, lines 30-37).

As to claim 3, Haymes further discloses the method as set forth in claim 1 wherein steps a) through c) are periodically repeated while the mobile station is powered up and located within the cell (col. 3, lines 1-18).

As to claim 4, the combination of Haymes and Oh further disclose the method as set forth in claim 1 wherein the multiple coordinates include an X coordinate and a Y coordinate associated with a surface area of the cell (col. 8, lines 1-10 of Oh).

As to claim 5, the combination of Haymes and Oh further disclose the method as

set forth in claim 4 wherein the multiple coordinates include a Z coordinate associated with an altitude within the cell (col. 8, lines 1-10, and col. 11, lines 1-12 of Oh).

As to claim 6, Haymes further discloses the method as set forth in claim 1 wherein the RF dead zone network includes an RF dead zone database (col. 3, lines 35-45), wherein the position data is stored in step c) is stored in the the RF dead zone database (col. 4, lines 20-30).

As to claim 7, Haymes further discloses the method as set forth in claim 1 wherein the RF dead zone network further includes a data network (col. 3, lines 47-60), an RF dead zone data processor, and an output device (Fig. 3, item 370, col. 3, lines 40-50).

As to claim 8, the combination of Haymes , and Oh further disclose the method as set forth in claim 1, before step a), further including: d) at the powered-up mobile station, receiving information from at least three RF transmitting devices (col. 3, lines 1-10 of Haymes); e) at the powered-up mobile station, determining the multiple coordinates forming the position data from the received information (col. 7, lines 14-27, and col. 8, lines 1-10 of Oh); and f) at the powered-up mobile station, transmitting the position data to the base station (col. 9, lines 10-17 of Oh).

As to claim 9, the combination of Haymes, Oh, and Scherzer further disclose the

method as set forth in claim 8, before step d), further including: g) at the powered-up mobile station, receiving a pilot strength measurement message from the base station (col. 5, lines 53-60 of Oh); and h) determining that the received pilot strength measurement message is less than a predetermined threshold (page 3, par. [0035] of Scherzer).

As to claim 10, Haymes further discloses the method as set forth in claim 1 wherein the RF transmitting devices include the base station and at least two additional base stations associated with the wireless network (col. 3, lines 1-10).

As to claim 11, Haymes further discloses the method as set forth in claim 1 wherein the RF transmitting devices include satellites associated with a global positioning system satellite constellation (Fig. 2, col. 3, lines 18-33).

As to claim 12, Haymes discloses a method for collecting data to identify an RF dead zone "**error rates and/or dead zones**" in a wireless network using a mobile station (col. 2, lines 20-30), wherein the wireless network provides wireless service to a geographic area comprised of a plurality of cells, wherein the wireless network includes a plurality of base stations corresponding to the plurality of cells (col. 3, lines 1-10), the method including the steps: and c) storing the position data in an RF dead zone database associated with the wireless network (col. 3, lines 35-47, and col. 4, lines 20-35).

However, Haymes does not disclose that: a) at a base station associated with a first cell of the plurality of cells, receiving position data from powered up mobile station located within the first cell, wherein the position data includes multiple coordinates indicating a location of the mobile station within the wireless network; b) communicating the position data from the at least one base station to a mobile switching center associated with the at least one base station and the wireless network.

Oh discloses a) at a base station associated with a first cell of the plurality of cells (Fig. 1, col. 4, lines 20-25), receiving position data from powered up mobile station located within the first cell (col. 5, lines 30-40), wherein the position data includes multiple coordinates indicating a location of the mobile station within the wireless network (Fig. 3, col. 6, lines 5-8); b) communicating the position data from the at least one base station to a mobile switching center associated with the at least one base station and the wireless network (col. 4, lines 18-53). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the position data from the base station to a mobile switching center associated with the base station as taught by Oh to the system of Haymes in order to prevent the mobile station drop the call when they moves from different location.

Furthermore, the combination of Haymes, and Oh do not disclose the position data being sent by the powered up mobile station when the mobile station determines that a received pilot strength measurement message is less than a predetermined threshold.

In the same field of endeavor, Scherzer discloses the position data being sent by the powered up mobile station when the mobile station determines that a received pilot strength measurement message is less than a predetermined threshold (page 3, par. [0035]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the position data being sent by the powered up mobile station when the mobile station determines that a received pilot strength measurement message is less than a predetermined threshold as taught by Scherzer to the combination of Haymes and Oh in order to detect the signal to make a system reliability.

As to claim 13, the claim is rejected for the same reason as set forth in claim 2.

As to claim 14, Haymes further discloses all the limitations in col. 3, lines 1-18.

As to claim 15, the claim is rejected for the same reason as set forth in claim 8.

As to claim 16, the claim is rejected for the same reason as set forth in claim 9.

As to claim 17, Oh further discloses all the limitations in col. 8, lines 1-10.

As to claim 18, the combination of Haymes and Oh further disclose the method as

set forth in claim 17 wherein step d) includes receiving information from at least four RF transmitting devices "col. 2 through col. 3, lines 62-17 of Haymes" and the multiple coordinates include a Z coordinate associated with an altitude associated with the geographic area of the wireless network (col. 8, lines 1-10 of Oh).

Allowable Subject Matter

5. Claims **19-21** allowed.

As to claim 19, the prior art of the record in alone, or combination do not disclose method for collecting data to identify an RF dead zone in a wireless network using a plurality of mobile stations, wherein the wireless network provides wireless service to a geographic area comprised of a plurality of cells, wherein the wireless network includes a plurality of base stations corresponding to the plurality of cells, the method including the steps: at each powered-up mobile station: a) receiving a pilot strength measurement message from the base station; and b) determining that the received pilot strength measurement message is less than a predetermined threshold. c) receiving information from at least three RF transmitting devices; d) determining the multiple coordinates forming the position data from the received information; and e) transmitting the position data to the at least one base station; at one or more base stations: f) receiving position data from each powered-up mobile

station whether or not any of the powered-up mobile station is connected to an incoming or outgoing call, the one or more base stations corresponding to one or more cells in which any of the powered-up mobile stations are located, wherein the position data from each powered-up mobile station includes multiple coordinates indicating a location of the powered-up mobile station within the wireless network; and g) communicating the position data to one or more mobile switching centers associated with the one or more base stations and the wireless network; and at one or more mobile switching centers: h) storing the position data received from the one or more base stations in an RF dead zone database associated with the wireless network.

Dependent claims 20-22 are allowed for the same reason.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUOC H. DOAN whose telephone number is 571-272-7920. The examiner can normally be reached on 9:30 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, GEORGE ENG can be reached on 571-272-7495. The fax

phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuoc Doan
05/13/06

GEORGE ENG
SUPERVISORY PATENT EXAMINER